

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331611

Luminaire Tested: **S122DIW-S1005D1440U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331611
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S1005D1440U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9799.1 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

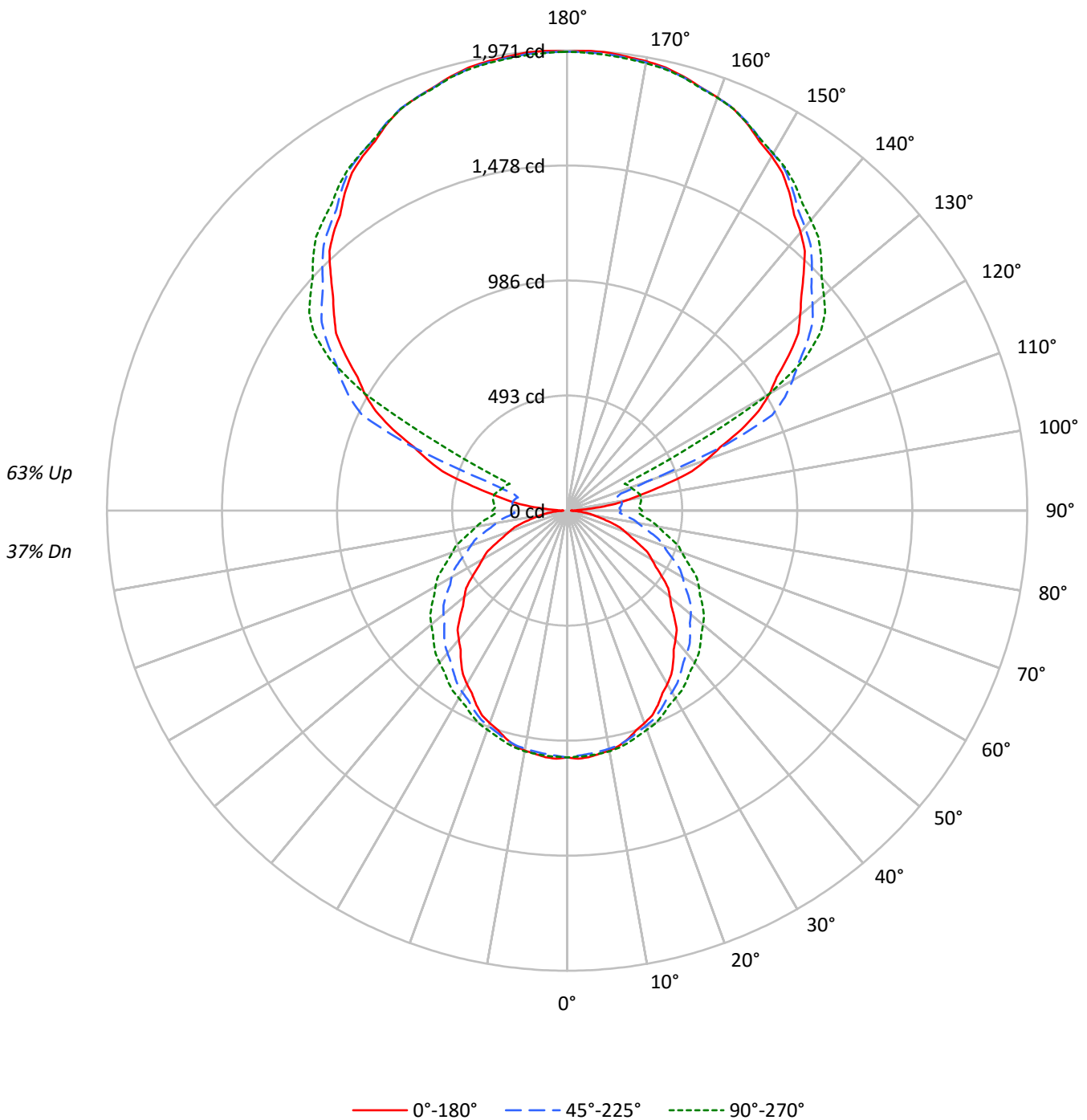
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331611

CATALOG NUMBER: S122DIW-S1005D1440U835-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331611

CATALOG NUMBER: S122DIW-S1005D1440U835-4F0-1E-UDD-D

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37
1	94	89	85	81	85	81	77	74	65	62	60	50	49	47	37	36	35	29
2	85	77	71	65	76	70	64	60	56	52	49	44	41	38	32	30	28	23
3	77	67	60	54	69	61	54	49	49	44	40	38	35	32	28	26	24	19
4	70	59	51	45	63	54	47	41	43	38	34	34	30	27	25	22	20	16
5	64	53	44	38	58	48	41	35	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	35	30	35	29	25	27	23	20	20	17	15	12
7	55	42	34	29	49	38	31	26	31	26	22	24	21	18	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	16	17	14	12	9
9	47	35	27	22	42	32	25	20	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	39	29	23	18	24	19	15	19	15	12	14	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17073	17073	17073
5°	17157	16435	16373
10°	17049	15949	15770
15°	16814	15435	15136
20°	16517	14884	14525
25°	16223	14353	13970
30°	15810	13808	13414
35°	15392	13280	13021
40°	14952	12831	12629
45°	14535	12429	12294
50°	14086	12066	11964
55°	13616	11675	11627
60°	13040	11269	11271
65°	12441	10795	10850
70°	11770	10285	10393
75°	10911	9784	9973
80°	9555	9272	9549
85°	8259	8830	9217



TEST NUMBER: P331611

CATALOG NUMBER: S122DIW-S1005D1440U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	1.0
10°-20°	287.3	2.9
20°-30°	435.4	4.4
30°-40°	530.3	5.4
40°-50°	570.5	5.8
50°-60°	554.1	5.7
60°-70°	483.8	4.9
70°-80°	372.4	3.8
80°-90°	254.8	2.6
90°-100°	237.8	2.4
100°-110°	366.2	3.7
110°-120°	725.8	7.4
120°-130°	1107.3	11.3
130°-140°	1147.7	11.7
140°-150°	1052.1	10.7
150°-160°	843.1	8.6
160°-170°	543.3	5.5
170°-180°	187.0	1.9
0°-30°	822.9	8.4
0°-40°	1353.3	13.8
0°-60°	2477.9	25.3
0°-90°	3588.9	36.6
90°-120°	1329.7	13.6
90°-150°	4636.8	47.3
90°-180°	6210.0	63.4
0°-180°	9799.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1060	1056	1047	1055	1054	101
15°	1012	1014	1014	1028	1027	285
25°	920	930	944	962	967	423
35°	792	819	848	880	892	495
45°	650	692	745	790	808	501
55°	498	555	633	686	708	445
65°	340	416	506	566	588	338
75°	188	275	372	436	458	199
85°	55	150	248	310	334	59
90°	17	122	231	297	320	15
95°	105	134	232	294	314	123
105°	440	505	219	285	310	471
115°	824	868	970	386	271	811
125°	1159	1181	1254	1303	1323	1034
135°	1432	1455	1483	1528	1539	1106
145°	1660	1660	1682	1701	1702	1038
155°	1828	1816	1832	1839	1829	842
165°	1926	1918	1921	1930	1921	544
175°	1970	1961	1963	1971	1958	187
180°	1966	1966	1966	1966	1966	



TEST NUMBER: P331611

CATALOG NUMBER: S122DIW-S1005D1440U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1063.6	1062.8	1061.9	1061.1	1060.3	1058.9	1057.0	1055.1	1053.2	1051.3	1052.7
5°	1060.5	1059.5	1058.5	1057.4	1056.4	1054.9	1052.9	1050.8	1048.8	1046.7	1048.8
7.5°	1051.0	1050.3	1049.6	1049.0	1048.3	1047.2	1045.6	1044.0	1042.5	1040.9	1043.3
10°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.1	1039.1	1038.0	1037.0	1036.0	1038.7
12.5°	1031.4	1031.5	1031.7	1031.8	1031.9	1031.6	1030.9	1030.1	1029.4	1028.6	1031.4
15°	1011.5	1012.2	1012.8	1013.5	1014.2	1014.5	1014.5	1014.5	1014.5	1014.5	1017.6
17.5°	985.7	987.2	988.6	990.0	991.4	992.7	993.8	994.9	996.0	997.1	1000.3
20°	968.6	970.3	972.0	973.7	975.4	976.9	978.3	979.6	981.0	982.4	986.1
22.5°	950.2	952.1	954.1	956.1	958.1	960.0	961.9	963.8	965.7	967.6	971.4
25°	919.5	921.9	924.3	926.7	929.1	931.8	934.8	937.9	941.0	944.0	948.1
27.5°	882.7	886.6	890.5	894.4	898.3	902.0	905.6	909.2	912.8	916.5	921.6
30°	858.2	862.6	867.1	871.5	875.9	880.4	884.8	889.2	893.6	898.1	903.5
32.5°	831.2	836.2	841.2	846.2	851.1	856.2	861.5	866.7	872.0	877.2	883.5
35°	792.3	798.1	803.9	809.7	815.5	821.6	828.1	834.5	841.0	847.5	855.0
37.5°	750.0	756.7	763.4	770.0	776.7	784.2	792.6	801.0	809.4	817.8	826.1
40°	721.8	729.3	736.8	744.3	751.8	760.1	769.3	778.5	787.7	796.9	805.8
42.5°	694.9	702.3	709.8	717.3	724.8	733.8	744.4	755.0	765.5	776.1	785.7
45°	649.8	659.0	668.2	677.4	686.6	697.1	709.1	721.0	732.9	744.8	755.4
47.5°	605.4	615.4	625.4	635.4	645.4	657.4	671.4	685.3	699.3	713.2	724.3
50°	574.7	585.3	595.8	606.4	616.9	629.9	645.2	660.5	675.8	691.2	702.8
52.5°	545.3	556.4	567.5	578.6	589.7	603.3	619.4	635.6	651.7	667.9	679.7
55°	498.1	510.3	522.6	534.9	547.1	562.1	579.8	597.5	615.2	632.9	645.2
57.5°	451.5	465.3	479.1	493.0	506.8	522.7	540.8	558.8	576.9	594.9	608.1
60°	418.4	433.0	447.7	462.3	477.0	494.0	513.4	532.8	552.2	571.6	584.6
62.5°	389.0	404.1	419.3	434.5	449.7	467.0	486.4	505.8	525.3	544.7	558.4
65°	340.2	356.9	373.6	390.3	407.0	425.4	445.5	465.5	485.6	505.7	519.7
67.5°	295.5	312.9	330.3	347.8	365.2	384.2	404.8	425.4	445.9	466.5	480.6
70°	263.6	281.3	299.0	316.7	334.4	353.8	375.0	396.1	417.2	438.3	452.9
72.5°	234.2	252.4	270.7	288.9	307.2	327.0	348.4	369.8	391.2	412.6	426.9
75°	188.5	207.6	226.6	245.7	264.8	285.2	307.0	328.8	350.6	372.4	387.0
77.5°	144.4	164.3	184.3	204.2	224.2	245.2	267.4	289.5	311.6	333.8	348.4
80°	114.9	135.7	156.5	177.3	198.0	219.5	241.6	263.8	285.9	308.0	322.3
82.5°	90.4	110.9	131.4	151.9	172.4	193.9	216.3	238.7	261.1	283.5	297.8
85°	55.2	76.3	97.4	118.5	139.6	161.1	182.9	204.7	226.5	248.3	262.6
87.5°	30.3	51.3	72.3	93.3	114.3	135.9	158.2	180.5	202.8	225.1	239.4
90°	16.7	40.0	63.2	86.4	109.7	133.4	157.8	182.1	206.4	230.7	245.9
92.5°	42.8	60.9	79.0	97.1	115.1	135.3	157.5	179.8	202.0	224.3	238.4
95°	104.7	110.3	115.9	121.4	127.0	141.1	163.8	186.4	209.1	231.7	246.2
97.5°	194.2	179.0	163.9	148.7	133.6	138.4	163.1	187.8	212.6	237.3	251.2
100°	262.5	231.8	201.1	170.4	139.7	136.5	161.0	185.4	209.9	234.3	249.5
102.5°	336.3	338.7	341.0	343.4	345.7	333.7	307.3	280.8	254.4	228.0	243.6
105°	440.0	459.4	478.7	498.1	517.5	492.8	424.3	355.7	287.1	218.6	234.0
107.5°	560.0	575.6	591.1	606.7	622.2	586.8	500.2	413.7	327.2	240.7	248.6
110°	636.2	649.6	663.1	676.5	690.0	659.4	584.7	510.1	435.4	360.8	340.1



TEST NUMBER: P331611

CATALOG NUMBER: S122DIW-S1005D1440U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	709.0	720.6	732.2	743.8	755.4	757.9	751.2	744.5	737.8	731.1	626.7
115°	823.9	833.0	842.2	851.3	860.4	876.6	899.8	923.0	946.2	969.5	833.4
117.5°	925.1	933.5	942.0	950.4	958.9	972.9	992.5	1012.1	1031.7	1051.3	1026.0
120°	1000.2	1006.3	1012.4	1018.5	1024.6	1037.3	1056.6	1075.9	1095.2	1114.5	1127.9
122.5°	1063.9	1069.4	1075.0	1080.5	1086.0	1098.3	1117.3	1136.3	1155.3	1174.3	1185.8
125°	1159.3	1163.5	1167.6	1171.7	1175.8	1186.3	1203.2	1220.1	1237.0	1253.9	1265.3
127.5°	1247.2	1251.4	1255.7	1259.9	1264.1	1272.8	1286.1	1299.4	1312.6	1325.9	1337.6
130°	1303.0	1307.7	1312.4	1317.1	1321.9	1329.5	1340.2	1350.8	1361.4	1372.0	1383.7
132.5°	1359.9	1363.8	1367.8	1371.8	1375.7	1382.2	1391.2	1400.2	1409.2	1418.2	1429.0
135°	1432.3	1437.4	1442.4	1447.5	1452.5	1458.2	1464.4	1470.7	1476.9	1483.2	1493.5
137.5°	1507.1	1510.6	1514.1	1517.5	1521.0	1525.1	1529.8	1534.5	1539.3	1544.0	1553.4
140°	1556.0	1558.2	1560.4	1562.6	1564.8	1568.0	1572.1	1576.3	1580.4	1584.6	1592.9
142.5°	1597.0	1598.9	1600.9	1602.8	1604.7	1607.8	1611.9	1616.0	1620.1	1624.2	1631.2
145°	1659.8	1659.4	1659.1	1658.8	1658.5	1661.0	1666.4	1671.8	1677.1	1682.5	1686.8
147.5°	1715.8	1714.6	1713.4	1712.2	1711.0	1713.0	1718.3	1723.7	1729.0	1734.3	1736.2
150°	1752.2	1750.0	1747.8	1745.6	1743.3	1744.8	1749.8	1754.9	1759.9	1765.0	1766.9
152.5°	1782.9	1780.5	1778.0	1775.5	1773.1	1774.2	1779.0	1783.8	1788.6	1793.4	1795.3
155°	1827.6	1824.7	1821.9	1819.0	1816.2	1816.7	1820.5	1824.3	1828.1	1831.8	1833.7
157.5°	1862.6	1860.2	1857.8	1855.4	1853.0	1853.1	1855.7	1858.4	1861.0	1863.7	1865.9
160°	1883.0	1881.1	1879.3	1877.4	1875.5	1875.5	1877.4	1879.3	1881.1	1883.0	1884.9
162.5°	1901.2	1899.4	1897.5	1895.6	1893.7	1893.5	1895.2	1896.8	1898.5	1900.1	1902.3
165°	1925.7	1923.8	1921.9	1920.0	1918.1	1917.7	1918.6	1919.5	1920.5	1921.4	1923.7
167.5°	1943.9	1942.0	1940.1	1938.2	1936.3	1935.8	1936.7	1937.6	1938.5	1939.4	1941.6
170°	1954.2	1952.3	1950.4	1948.5	1946.6	1945.9	1946.6	1947.2	1947.8	1948.5	1950.7
172.5°	1961.0	1959.1	1957.2	1955.3	1953.4	1952.8	1953.4	1954.0	1954.7	1955.3	1957.5
175°	1969.8	1967.6	1965.4	1963.2	1961.0	1960.2	1960.8	1961.4	1962.1	1962.7	1964.9
177.5°	1971.2	1969.5	1967.7	1965.9	1964.1	1963.4	1963.6	1963.9	1964.1	1964.4	1966.2
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5



TEST NUMBER: P331611

CATALOG NUMBER: S122DIW-S1005D1440U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1054.0	1055.4	1056.8	1057.2	1056.6	1056.1	1055.5	1055.0
5°	1050.8	1052.9	1054.9	1055.7	1055.4	1055.1	1054.7	1054.4
7.5°	1045.8	1048.3	1050.7	1051.8	1051.4	1051.1	1050.7	1050.4
10°	1041.4	1044.2	1046.9	1048.1	1047.7	1047.4	1047.1	1046.7
12.5°	1034.1	1036.8	1039.5	1040.7	1040.4	1040.0	1039.7	1039.4
15°	1020.7	1023.7	1026.8	1028.2	1027.8	1027.5	1027.1	1026.8
17.5°	1003.5	1006.7	1009.9	1011.5	1011.5	1011.5	1011.5	1011.5
20°	989.8	993.6	997.3	999.2	999.2	999.2	999.2	999.2
22.5°	975.1	978.9	982.6	984.8	985.3	985.9	986.4	987.0
25°	952.2	956.3	960.4	962.9	964.0	965.0	966.0	967.0
27.5°	926.8	932.0	937.2	940.1	940.9	941.6	942.4	943.1
30°	909.0	914.4	919.9	923.1	924.1	925.1	926.2	927.2
32.5°	889.8	896.0	902.3	906.3	908.2	910.0	911.9	913.7
35°	862.5	870.0	877.5	882.4	884.8	887.2	889.6	891.9
37.5°	834.4	842.7	851.0	856.4	858.9	861.5	864.0	866.5
40°	814.6	823.5	832.3	838.3	841.4	844.4	847.5	850.6
42.5°	795.4	805.1	814.8	821.1	824.2	827.3	830.3	833.4
45°	765.9	776.5	787.0	794.0	797.4	800.8	804.2	807.6
47.5°	735.3	746.3	757.4	764.8	768.5	772.3	776.0	779.8
50°	714.3	725.9	737.5	745.2	748.9	752.6	756.4	760.1
52.5°	691.6	703.4	715.3	723.2	727.2	731.3	735.3	739.3
55°	657.5	669.7	682.0	690.3	694.7	699.2	703.6	708.0
57.5°	621.4	634.6	647.8	656.6	661.1	665.6	670.1	674.6
60°	597.5	610.5	623.4	632.3	637.0	641.8	646.6	651.3
62.5°	572.2	585.9	599.7	608.8	613.3	617.8	622.3	626.8
65°	533.7	547.6	561.6	570.8	575.2	579.6	584.1	588.5
67.5°	494.7	508.8	522.9	532.3	536.9	541.5	546.2	550.8
70°	467.6	482.2	496.9	506.2	510.3	514.4	518.5	522.6
72.5°	441.3	455.7	470.0	479.7	484.6	489.5	494.4	499.3
75°	401.7	416.3	431.0	440.5	444.9	449.4	453.8	458.2
77.5°	362.9	377.5	392.1	401.8	406.5	411.3	416.1	420.8
80°	336.6	351.0	365.3	374.8	379.6	384.3	389.1	393.9
82.5°	312.1	326.4	340.7	350.1	354.6	359.1	363.6	368.1
85°	276.9	291.2	305.5	315.0	319.8	324.6	329.3	334.1
87.5°	253.6	267.8	282.0	291.3	295.8	300.3	304.8	309.3
90°	261.1	276.3	291.6	301.5	306.2	310.9	315.7	320.4
92.5°	252.6	266.8	280.9	290.3	294.7	299.2	303.7	308.1
95°	260.8	275.3	289.8	298.9	302.7	306.5	310.3	314.0
97.5°	265.0	278.9	292.8	301.9	306.3	310.7	315.1	319.5
100°	264.6	279.7	294.8	304.6	309.0	313.3	317.7	322.1
102.5°	259.2	274.9	290.5	300.6	305.2	309.9	314.5	319.1
105°	249.3	264.7	280.1	290.3	295.4	300.4	305.4	310.4
107.5°	256.5	264.4	272.3	278.8	283.8	288.8	293.8	298.8
110°	319.4	298.6	277.9	270.1	275.1	280.1	285.1	290.1



TEST NUMBER: P331611

CATALOG NUMBER: S122DIW-S1005D1440U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	522.3	417.9	313.5	263.7	268.4	273.2	277.9	282.7
115°	697.2	561.1	425.0	347.4	328.4	309.4	290.4	271.4
117.5°	1000.7	975.4	950.1	901.8	830.5	759.2	687.8	616.5
120°	1141.2	1154.5	1167.8	1155.0	1116.1	1077.2	1038.3	999.4
122.5°	1197.4	1208.9	1220.5	1223.7	1218.6	1213.5	1208.5	1203.4
125°	1276.7	1288.1	1299.5	1307.2	1311.3	1315.3	1319.3	1323.3
127.5°	1349.3	1360.9	1372.6	1380.0	1383.2	1386.4	1389.6	1392.8
130°	1395.3	1407.0	1418.6	1425.7	1428.1	1430.5	1432.9	1435.3
132.5°	1439.9	1450.8	1461.6	1468.3	1470.7	1473.1	1475.5	1477.9
135°	1503.8	1514.1	1524.4	1530.6	1532.7	1534.8	1536.9	1539.0
137.5°	1562.7	1572.1	1581.4	1586.7	1588.0	1589.2	1590.5	1591.7
140°	1601.2	1609.5	1617.8	1622.1	1622.6	1623.1	1623.5	1624.0
142.5°	1638.1	1645.1	1652.0	1655.6	1655.8	1656.0	1656.2	1656.4
145°	1691.0	1695.3	1699.5	1701.7	1701.8	1702.0	1702.1	1702.2
147.5°	1738.1	1740.0	1741.9	1742.6	1742.1	1741.6	1741.1	1740.6
150°	1768.8	1770.7	1772.6	1772.7	1771.2	1769.6	1768.0	1766.4
152.5°	1797.2	1799.1	1801.0	1800.9	1798.8	1796.8	1794.7	1792.6
155°	1835.6	1837.5	1839.4	1839.1	1836.6	1834.1	1831.5	1829.0
157.5°	1868.0	1870.1	1872.3	1872.1	1869.7	1867.2	1864.7	1862.3
160°	1886.8	1888.7	1890.6	1890.5	1888.3	1886.0	1883.8	1881.6
162.5°	1904.4	1906.6	1908.7	1908.4	1905.7	1903.0	1900.3	1897.6
165°	1925.9	1928.1	1930.3	1930.3	1928.1	1925.9	1923.7	1921.4
167.5°	1943.8	1946.0	1948.2	1947.9	1945.1	1942.2	1939.4	1936.5
170°	1952.9	1955.1	1957.3	1957.0	1954.2	1951.3	1948.5	1945.6
172.5°	1959.7	1961.9	1964.1	1963.8	1961.0	1958.1	1955.3	1952.4
175°	1967.1	1969.3	1971.5	1971.1	1967.9	1964.7	1961.6	1958.4
177.5°	1967.9	1969.7	1971.5	1971.2	1968.9	1966.7	1964.4	1962.1
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5

(END OF REPORT)